***Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

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| 1. a) In your own words describe: **similarity** and **congruence.**   b) How is similarity different than congruence? | |
| 1. ../../../../../Desktop/Similar%20Triangles%20W%20numbers.pngCopy the triangles and table below into your notebook. Complete the table.  |  |  |  | | --- | --- | --- | | Measure of side (*ΔABC*) | Measure of side (*ΔDEF*) | Ratio | | *AB =* | *DE =* |  | | *BC =* | *EF =* |  | | *CA =* | *FD =* |  | | |
| 1. Based on what you see above, define a **ratio** and **proportion**. | |
| Directions: Use the given **scale factor** to find and label all the sides of each triangle. | |
| 1. Scale factor from ABC to DEF is 1/3 or 1:3  |  |  | | --- | --- | | *AB = 3* | *DE=* | | *BC = 7* | *EF=* | | *CA = 7* | *FD =* | | 1. Scale factor from ABC to DEF is 2 or 2:1  |  |  | | --- | --- | | *AB = 3* | *DE=* | | *BC = 5* | *EF=* | | *CA = 7* | *FD =* | |
| 1. Scale factor from ABC to DEF is ½or 1:2  |  |  | | --- | --- | | *AB = 10* | *DE=* | | *BC = 4* | *EF=* | | *CA = 10* | *FD =* | | 1. Scale factor from DEF to ABC is 5 or 5:1  |  |  | | --- | --- | | *AB = 15* | *DE=* | | *BC = 5* | *EF=* | | *CA = 20* | *FD =* | |

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| Directions: State if the triangles are similar or not. Show work to support your answer. | |
| 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.16.48%20PM | 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.16.55%20PM |
| 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.17.06%20PM | 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.17.14%20PM |
| 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.17.19%20PM | 1. ../../../../../Desktop/Screen%20Shot%202015-12-06%20at%205.23.15%20PM |

Failure to show ALL WORK and follow all directions COMPLETELY will result in LaSalle.

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| --- | --- |
| 1. If solve for x and y. | 2. If solve for x. |
| 3. | 4. solve for x. |
| 5. Solve for x. | 6. Solve for x. |
| 7. If solve for x. | 8. Solve for d. |
| 9. | |
| 10.  In order to estimate the height *h* of a flag pole, a 5 foot tall male student stands so that the tip of his shadow coincides with the tip of the flag pole’s shadow. This scenario results in two similar triangles as shown in the diagram. What is the height *h* (in feet) of the flag pole?   1. Draw a picture to model the situation. 2. Label the picture with the given information. 3. Solve. | |
| 11. | |
| 12. If , what are the coordinates of point Q? Explain how you determined your answer. | |